

Exhibit 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION NUMBER 08/470,571

DECLARATION OF DR. GEORGE T. LIGLER

I, George T. Ligler, declare as follows:

I. INTRODUCTION

1. This declaration is submitted to address several technical and fact issues that have arisen in the prosecution within the United States Patent and Trademark Office (USPTO) of patent application 08/470,571.

2. I have been asked to consider the following topics:

- (1) Whether or not the specifications of U.S. patent application Ser. No. 06/317,510 filed November 3, 1981 ("the 1981 specification") and U.S. patent application Ser. No. 07/096,096 filed September 11, 1987 ("the 1987 specification") each include a written description of the subject matter claimed in the set of amended claims for patent application 08/470,571 attached as Tab A to this Declaration ("the amended claims");
- (2) Several issues raised by the Examiner in Sections I through VI of the July 17, 2002 Office Action in this matter ("the July 2002 Office Action"), specifically:
 - (a) several aspects of the definition of the term "programming" as used in the 1981 and 1987 specifications, and the extent to which the term "programming" bears on the issue of whether or not the amended claims are adequately supported by both specifications;
 - (b) the extent to which any differences in the signaling method and terminology described in the 1981 and 1987 specifications would bear on the issue of whether or not the amended claims are adequately supported by both specifications; and

- (c) the extent to which any differences in the description of the Wall Street Week example in the 1981 and 1987 specifications would bear on the issue of whether or not the amended claims are adequately supported by both specifications.

3. I understand that this Declaration is being submitted in conjunction with Applicant's Response to the July 2002 Office Action.

II. QUALIFICATIONS

4. As set forth in my resume (attached at Tab B), I am self-employed by GTL Associates as a consultant for clients in the fields of telecommunications, computer systems engineering, and product management. My work involves the design, specification, and consideration of computer and microprocessor-based systems, including use of those systems within a telecommunications context, with respect to both hardware and software.

5. I earned a Bachelor's degree in Mathematics (*summa cum laude*) from Furman University in 1971, and Master of Science (M.Sc.) and Doctorate (D.Phil.) degrees in Computer Science from Oxford University in 1973 and 1975, respectively. My studies at Oxford were supported by a Rhodes Scholarship.

6. I have more than twenty-five years of professional experience in the management of projects involving computer-based systems and in the fields of computer hardware, software, and systems design. Projects for which I have been responsible have ranged in size from the development of software products by small teams of programmers to the design and implementation, under a contract initially valued at \$282M, of a nationwide communications network for the U.S. Treasury Department.

7. Of particular relevance to the present matter is my software and computer systems engineering experience between 1978 and 1987.

8. Beginning in 1978, I was responsible until April 1980 for a computer systems engineering branch within the Advanced Software Technology Department at Texas Instruments. The work of the branch focused on topics including the development of both software (including embedded operating systems) and hardware for application-specific microprocessor-based computer systems, including bus interface units used to support digital communications. I additionally chaired a corporate-wide task force that developed a high-level-language-oriented microprocessor architecture.

9. In 1980-1982 I was Deputy Manager of Great Valley Laboratories and subsequently Deputy General Manager and Director of Engineering of the Special Systems Division of the Burroughs Corporation. In the latter capacity, I was responsible for programs including research and development in distributed processing, the use of display technology, and telecommunications. My organization included approximately 450 engineering and support personnel.

10. From 1982 to 1984 I was President of the Aydin Controls Division of the Aydin Corporation. Aydin Controls designed, manufactured, and marketed high resolution color graphic display generators and color monitors for over 300 Original Equipment Manufacturers and end users.

11. From 1984 to 1987 I was a Division Vice President at Computer Sciences Corporation, and had program responsibility in several business areas involving telecommunications and computer systems technology.

12. I have authored or co-authored twenty technical publications in several fields, including articles relating to computer programming languages and their implementation, computer software development methodologies, and computer/computer system architecture. Tab C is a list of these publications, as well as information on indicative abstracts and standards group working papers which I have authored or co-authored.

13. I have taught graduate and undergraduate level courses at the University of Texas at San Antonio in computer science, given numerous invited lectures in several technology areas, served on doctoral dissertation committees, and served, *pro bono*, on advisory committees formed by the National Research Council and other bodies.

14. I have been engaged by the Hunton & Williams law firm as a consultant in connection with this matter. I have been compensated at my normal consulting rate, plus expenses. I will receive no other compensation for my work in this matter.

15. Attached at Tab D is a list of materials cited and/or reviewed in preparing this Declaration. In particular, I have reviewed Sections 201.11 and 2163 of the Manual of Patent Examining Procedures (MPEP) (8th Ed. 2001) in conjunction with 35 U.S.C. §§ 112 and 120 and I have applied the standards set forth in those documents to perform my analysis of the written description issue raised in (1) in Paragraph 2 above.

III. SUMMARY OF OPINIONS

16. I have formed the following opinions based principally upon (1) my direct experience between 1978 and 1987 summarized above; (2) trial testimony which I have read and about which I have previously opined concerning the level of ordinary skill prior to 1985 in the art of the 1981 and 1987 specifications; and (3) my review of the 1981 specification, the 1987 specification, the amended claims, MPEP materials cited above, and the July 2002 Office Action:

- A. A person of ordinary skill in the art of the 1981 and 1987 specifications in 1981 would be a skilled individual in the computer arts and in television and/or cable systems. This individual might be degreed or alternatively might have extended experience after either a high school education or a high school education plus a few years of college. A person of ordinary skill in the art of the 1981 and 1987 specifications in 1987 would have the same level of skill but would be more likely to have a college degree and

would also be aware of advances in the art that had occurred between 1981 and 1987.

- B. From the vantage point of such a person of ordinary skill in 1981, the claimed subject matter of the amended claims is sufficiently described in the 1981 specification. From the vantage point of such a person of ordinary skill in 1987, the same claimed subject matter of the amended claims is sufficiently described in the 1987 specification.
- C. Differences between the 1981 and 1987 specifications concerning the topics enumerated in Paragraph 2(2) above would not impact the ability of such persons of ordinary skill in the art to conclude that the subject matter claimed in the amended claims is sufficiently described in both specifications.

IV. BASES FOR OPINIONS

17. References herein to the 1981 specification are made with regard to the presentation of that specification in U.S. Patent 4,694,490.

A. Person of Ordinary Skill in the Art of the 1981 and 1987 Specifications

18. While the 1981 specification does not expressly list the fields involved therein, the commonality with the express recitations in the 1987 specification is clear (1987 specification at page 1, lines 10-17). The 1981 specification clearly discusses (following the 1987 specification's enumeration):

- (a) computer processing: e.g., at col. 4, l. 68 to col. 5, l. 7; col. 19, ll. 48-53.
- (b) computer communications: e.g., at col. 5, ll. 11-14; col. 19, ll. 35-41.
- (c) television: e.g., at col. 3, ll. 32-37.
- (d) radio: e.g., at col. 3, ll. 51-56.
- (e) other electronic communications: e.g., at col. 3, ll. 51-56.

- (f) automating the handling, recording, and retransmitting of television, radio, computer, and other electronically transmitted programming: at, e.g., col. 3, ll. 51-56; col. 10, ll. 14-23; col. 11, ll. 38-44.
- (g) regulating, metering, and monitoring the availability, use, and usage of such programming: at, e.g., col. 3, ll. 41-47; col. 3, l. 66 to col. 4, l. 4; col. 5, ll. 11-14.

19. As discussed in Section II above, I was directly involved in the research, development, and management of microcomputer-based systems including display and telecommunications technology in the period 1978-1987. My duties included supervision of many engineering and technical personnel in these fields. Additionally, I have reviewed trial testimony specifically regarding the level of experience of practitioners in the fields of the computer arts as they relate to the provision of information over cable television systems in this time frame such as John Kerklo, Charles Clupper, and Michael Axford (please see Tab E). I therefore conclude

Opinion A: A person of ordinary skill in the art of the 1981 and 1987 specifications in 1981 would be a skilled individual in the computer arts and in television and/or cable systems. This individual might be degreed or alternatively might have extended experience after either a high school education or a high school education plus a few years of college. A person of ordinary skill in the art of the 1981 and 1987 specifications in 1987 would have the same level of skill but would be more likely to have a college degree and would also be aware of advances in the art that had occurred between 1981 and 1987.

B. The 1981 and 1987 Specifications and the Written Description Requirement with Regard to the Amended Claims

20. I have carefully reviewed the amended claims in view of both the 1981 specification as understood by a person of ordinary skill in the art in 1981 and the 1987 specification as understood by a person of ordinary skill in the art in 1987. I will discuss at this point how both the 1981 and 1987 specifications so understood support the

claimed subject matter of independent amended claims 56, 80, and 93. Tab F is a Supplemental Support Chart which provides the basis of support for amended claims other than independent amended claims 56, 80, and 93. Although I have provided the bases for my opinion for claims other than amended claims 56, 80, and 93 in chart form for purposes of brevity, I conducted the same detailed analysis for those claims as I have done for amended claims 56, 80, and 93.

(1) Amended Claim 56

21. Amended claim 56 recites the following, with annotations providing exemplary support from the 1981 and 1987 specifications:

A method for receiving and processing remotely originated and user specific data for use with a video apparatus, said video apparatus having a video output device for displaying a video presentation comprising a locally generated image and an image received from a remote video source, said method comprising the steps of:

receiving said user specific data at said video apparatus, said user specific data being specific to a user of said video apparatus (1981 specification at, e.g., col. 18, ll. 46-49; col. 19, ll. 40-41; 1987 specification at, e.g., p. 21, ll. 5-14);

contacting a remote data source after said step of receiving said user specific data (1981 specification at, e.g., col. 19, ll. 37-41; 1987 specification at, e.g., p. 449, ll. 26-35);

receiving from said remote data source based on said step of contacting said remotely originated data to serve as a basis for displaying said video presentation (1981 specification at, e.g., col., ll. 39-41; 1987 specification at, e.g., p. 449, ll. 34-35);

executing processor instructions to process said remotely originated data and said user specific data at said video apparatus in order to generate said locally

generated image (disclosed microcomputer 205: 1981 specification at, e.g., col. 18, ll. 47-49, col. 19, ll. 50-52, and col. 19, l. 67 to col. 20, l. 2; 1987 specification at, e.g., p. 24, ll. 22 to p. 25, l. 8); and

simultaneously displaying said locally generated image and said image received from said remote video source at said video output device (1981 specification at, e.g., col. 19, l. 67 to col. 20, l. 2; 1987 specification at, e.g., p. 26, ll. 4-11).

22. In both specifications, exemplary “user specific data” is information on the stock portfolio of the user (1981 specification at, e.g., col. 18, ll. 46-49; 1987 specification at, e.g., p. 21, ll. 5-14). This data inherently is received by the exemplary video apparatus in the 1981 specification, or it could not become a “stored portfolio” (1981 specification at, e.g., col. 19, ll. 40-41). While the 1987 specification discloses that the exemplary portfolio information is received by the video apparatus on a floppy disk (1987 specification at, e.g., p. 21, ll. 5-14), this particular method of reception is not recited in amended claim 56.

23. In both the 1981 and 1987 specifications, an exemplary disclosure of “contacting” a remote data source after said step of receiving is provided by the querying of a data service (1981 specification at, e.g., col. 19, ll. 37-39; 1987 specification at, e.g., p. 449, ll. 26-35). While the specific words used to describe this querying are not identical, a remote data source is clearly being contacted as claimed in amended claim 56. That this contacting step is performed after the first step of receiving recited in amended claim 56 is supported by both the 1981 (at least inherently) and 1987 (expressly) specifications (1981 specification at, e.g., col. 19, ll. 39-41; 1987 specification at, e.g., p. 449, ll. 31-35).

24. In both the 1981 and 1987 specifications, disclosure is provided supporting the third step of amended claim 56, which recites that the contacting step results in the receipt of remotely originated data, exemplified by stock quote information for the stored user portfolio (1981 specification at, e.g., col. 19, ll. 39-41; 1987 specification at, e.g., p. 449, ll. 34-35).

25. In both the 1981 and 1987 specifications, the exemplary video apparatus executes processor instructions (on disclosed microcomputer 205: 1981 specification at, e.g., col. 18, ll. 47-49 and col. 19, ll. 50-52; 1987 specification at, e.g., p. 24, ll. 22-27) to process the remotely originated data (the exemplary stock quotes) and user specific data (the exemplary stored list of stock holdings) in order to generate a locally generated image (exemplified by the overlay of the user's own stocks' performance that will be used in the presentation of the Wall Street Week television program (1981 specification at, e.g., col. 19, l. 67 to col. 20, l. 2; 1987 specification at, e.g., p. 24, l. 22 to p. 25, l. 8).

26. Finally, both the 1981 and 1987 specifications disclose that the exemplary locally generated image (overlay of the user's own stocks' performance) and an image received from a remote video source (e.g., a studio generated graphic received in a transmission of the Wall Street Week television program) are simultaneously displayed (1981 specification at, e.g., col. 19, l. 67 to col. 20, l. 2; 1987 specification at, e.g., p. 26, ll. 4-11).

27. The above evidence clearly indicates, in my opinion, that the claimed subject matter of amended claim 56 is disclosed in sufficient detail, in both the 1981 and 1987 specifications, that a person of ordinary skill in the relevant time frames would reasonably understand that the inventor possessed the subject matter of amended claim 56 at the time of the filing of those specifications.

(2) Amended Claim 80

28. Amended claim 80 recites the following, with annotations providing exemplary support from the 1981 and 1987 specifications:

80. A method of controlling a video presentation at at least one receiver station of a plurality of receiver stations, said method comprising the steps of:

transmitting a signal from an origination transmitter to a remote intermediate transmitter station, said signal including video and an instruct signal which is operative at said at least one receiver station to instruct said at least one receiver station to at least one of generate and output a locally generated portion of said video presentation based on data specific to a user of said receiver station for display coordinated with said video (1981 specification at, e.g., col. 10, ll. 14-61; col. 18, ll. 46-49; col. 19, ll. 5-9, ll. 42-53, and ll. 60-66; and col. 19, l. 67 to col. 20, l. 2; 1987 specification at, e.g., Figure 2I; p. 12, ll. 18-25; p. 20, ll. 21-26; p. 21, ll. 5-14; p. 24, l. 16 to p. 25, l. 8; p. 25, l. 33 to p. 26, l. 12, p. 62, ll. 26-28, and p. 105, l. 9 to p. 106, l. 3); and

transmitting at least one control signal from said origination transmitter to said remote intermediate transmitter station before a specific time, wherein said at least one control signal is effective at said remote intermediate transmitter station to control communication of said video and said instruct signal to said at least one receiver station (1981 specification at, e.g., col. 11, ll. 38-43; 1987 specification at, e.g., p. 328, ll. 8-13).

29. In both the 1981 and 1987 specifications, origination transmitters are disclosed as providing to intermediate transmitter stations signals which include both

video and instruction signals, signals which instruct microcomputers at subscriber stations to perform particular operations (1981 specification at, e.g., col. 10, ll. 14-61; col. 19, ll. 42-44, ll. 60-62; 1987 specification at, e.g., p. 12, ll. 18-25; p. 25, l. 33 to p. 26, l. 12). The detailed data signaling protocol presented in the 1987 specification and not presented in the 1981 specification is simply not recited in amended claim 80. The Wall Street Week television program is given as a specific example of transmitted video in both specifications (1981 specification at, e.g., col. 19, ll. 5-9; 1987 specification at, e.g., p. 20, ll. 21-26). Moreover, both specifications expressly disclose examples of instruction signals (see Paragraph 30 below) broadcast by an origination transmitter which cause a microcomputer at a subscriber's receiver station to either generate or output the same exemplary locally generated portion of the Wall Street Week video presentation (i.e., an overlay of the user's own stocks' performance, see Paragraph 25 above). This overlay is disclosed in both specifications as being based on data specific to a user of the receiver station (i.e., the user's stored stock portfolio) and is displayed in a manner coordinated with the Wall Street Week video (see Paragraphs 22 and 26 above).

30. The specific exemplary signals disclosed to cause the generation of the exemplary overlay are discussed in a much more detailed fashion in the 1987 specification than in the 1981 specification (see, e.g., the End of File Signal (EOFS) in the 1987 specification at Figure 2I, p. 24, ll. 16-21, p. 62, ll. 26-28, and p. 105, l. 9 to p. 106, l. 3; 1981 specification at, e.g., col. 19, ll. 45-53). However, none of these details are recited in amended claim 80. Similarly, the specific exemplary signals disclosed to cause the outputting of the overlay of the user's own stocks' performance onto the studio generated graphic within the Wall Street Week television broadcast are more detailed in the 1987 specification than in the 1981 specification (see, e.g., the 1987 specification at p. 25, l. 34 to p. 26, l. 11; the 1981 specification at, e.g., col. 19, ll. 60-66). Again, none of these details are recited in amended claim 80.

31. With regard to the second step of amended claim 80, both the 1981 and 1987 specifications disclose the exemplary use of program identification signals that control, at exemplary intermediate transmitter stations, the communication of television programs such as Wall Street Week to subscriber receiver stations (1981 specification at, e.g., col. 11, ll. 38-43; 1987 specification at, e.g., p. 328, ll. 8-13). Such signals are disclosed in both specifications as, for example, being used in conjunction with programming schedules to determine at the intermediate transmitter station (such as a cable head end) when and on what channel or channels television programming should be transmitted. As with the instruction signals discussed in Paragraph 30 above, the 1987 specification describes a more detailed signaling protocol for the program identification signals than is described in the 1981 specification. However, none of these details are recited in amended claim 80.

32. The above evidence clearly indicates, in my opinion, that the claimed subject matter of amended claim 80 is disclosed in sufficient detail, in both the 1981 and 1987 specifications, that a person of ordinary skill in the relevant time frames would reasonably understand that the inventor possessed the subject matter of amended claim 80 at the time of the filing of those specifications.

(3) Amended Claim 93

33. Amended claim 93 recites the following, with annotations providing exemplary support from the 1981 and 1987 specifications:

93. A method of outputting a video presentation at a receiver station (1981 specification at, e.g., col. 17, ll. 47-49; 1987 specification at, e.g., p. 390, ll. 30-35), said method comprising the steps of:

receiving at least one information transmission at said receiver station, said at least one information transmission including a first discrete signal and a second discrete signal (1981 specification at, e.g., col. 2, l. 64 to col. 3, l. 12 and col. 19, l. 45; 1987 specification at, e.g., p. 14, l. 22 to p. 15, l. 6 and p. 20, ll. 25-26);

detecting said first discrete signal and said second discrete signal in said at least one information transmission (1981 specification at, e.g., col. 6, ll. 53-61; 1987 specification at, e.g., p. 35, ll. 4-16);

passing said detected at least one first discrete signal and said second discrete signal to at least one processor (1981 specification at, e.g., col. 7, ll. 6-8 and col. 8, ll. 35-39; 1987 specification at, e.g., p. 29, l. 30 to p. 30, l. 6 and p. 33, ll. 18-21);

organizing information included in said at least one first discrete signal with information included in said second discrete signal to provide an organized signal at said receiver station (1981 specification at, e.g., col. 7, ll. 36-39; 1987 specification at, e.g., p. 30, ll. 7-9; p. 69, ll. 10-12; and p. 74, ll. 10-13);

generating an image in response to said organized signal by processing at least one user specific subscriber datum, said at least one user specific subscriber datum being stored at said receiver station prior to said step of organizing and based on information supplied by a user of said receiver station (1981 specification at, e.g., col. 18, ll. 46-49; col. 19, ll. 40-41 and ll. 45-53; 1987 specification at, e.g., p. 21, ll. 5-14; p. 24, ll. 22-27; p. 105, ll. 9-35; and Figure 21); and

outputting said video presentation to said user, said video presentation comprising, firstly, a video image and, secondly, a coordinated display using said generated image and said video image (1981 specification at, e.g., col. 19, ll. 30-34 and col. 19, l. 67 to col. 20, l. 2; 1987 specification at, e.g., p. 12, ll. 3-9 and p. 25, l. 33 to p. 26, l. 11).

34. Amended claim 93 recites a method performed at a receiver station, examples of which are equipment in a home or office (1981 specification at, e.g., col. 17, ll. 47-49; 1987 specification at, e.g., p. 390, ll. 30-35).

35. In both the 1981 and 1987 specifications, the receiving, detecting, passing, and organizing steps of amended claim 93 are exemplified in the reception and decoding of an instruction signal to be used in subsequent steps of the claim to instruct the receiver station to generate, in the Wall Street Week example (1981 specification at, e.g., col. 19, l. 45; 1987 specification at, e.g., p. 20, ll. 25-26), an overlay of the receiver station's user's own stocks' performance (see Paragraphs 25 and 30 above). The first and second discrete signals of these steps are signal words which comprise portions of a signal unit which will be this instruction signal (1981 specification at, e.g., col. 2, l. 64 to col. 3, l. 12; 1987 specification at, e.g., p. 14, l. 22 to p. 15, l. 6). The detection of the first and second discrete signals is disclosed in both specifications as occurring in a line receiver and digital detector (1981 specification at, e.g., col. 6, ll. 53-61; 1987 specification at, e.g., p. 35, ll. 4-16). Both specifications further discuss that the detected discrete signals are passed to a buffer/comparator (1981 specification at, e.g., col. 7, ll. 6-8; 1987 specification at, e.g., p. 29, l. 30 to p. 30, l. 6). Operations of the buffer/comparator on assembly of signal words into signal units can be directed by a controller: the two circuits together form a processor (1981 specification at, e.g., col. 8, ll. 35-39; 1987 specification at, e.g., p. 33, ll. 18-21). Finally, both specifications disclose that the received, detected,

and passed first and second discrete signals are organized in buffer comparator 8 (1981 specification at, e.g., col. 7, ll. 36-39; 1987 specification at, e.g., p.30, ll. 7-9; p. 69, ll. 10-12; and p. 74, ll. 10-13).

36. The generating step of amended claim 93 is supported by both the 1981 and 1987 specifications in a manner discussed in Paragraphs 22, 25, and 30 above.

37. Finally, the outputting step of amended claim 93 is supported by both the 1981 and 1987 specifications as discussed in Paragraph 26 above. Both the 1981 and 1987 specifications further disclose such outputting as presenting a display that is coordinated in time (1981 specification at, e.g., col. 19, ll. 30-34; 1987 specification at, e.g., p. 12, ll. 3-9, p. 25, l. 33 to p. 26, l. 11).

38. The above evidence clearly indicates, in my opinion, that the claimed subject matter of amended claim 93 is disclosed in sufficient detail, in both the 1981 and 1987 specifications, that a person of ordinary skill in the relevant time frames would reasonably understand that the inventor possessed the subject matter of amended claim 93 at the time of the filing of those specifications.

39. As mentioned above, Tab F is a Supplemental Support Chart which provides the basis of support for amended claims other than independent claims 56, 80, and 93. On the basis of the discussion in Paragraphs 17-38 above and Tab F, I therefore conclude:

Opinion B: From the vantage point of such a person of ordinary skill in 1981, the claimed subject matter of the amended claims is sufficiently described in the 1981 specification. From the vantage point of such a person of ordinary skill in 1987,

the same claimed subject matter of the amended claims is sufficiently described in the 1987 specification.

C. Impact of Differences between the 1981 and 1987 Specifications

40. The emphasis in Opinion B above on the word “claimed” when modifying the term “subject matter” is key to the analysis presented in Paragraphs 17-39, as there are clearly many differences between the 1981 and 1987 specifications, particularly (though not only) in the level of detail of presentation. In this context, I have been asked to consider several issues raised by the Examiner in Sections I through VI of the July 2002 Office Action and to determine any impact of those issues on the question of whether or not the amended claims are adequately supported by the 1981 and 1987 specifications.

(1) “Programming”

41. In the July 2002 Office Action, the Examiner states that a change was made to the definition of the word “programming” in the 1987 specification as compared to the 1981 specification (July 2002 Office Action, at, e.g., pp. 21-22). In developing his argument, however, the Examiner takes, as I understand the argument, an overly narrow interpretation of the 1981 specification’s definition of the term:

“everything that is transmitted over television or radio intended for
communication of entertainment or to instruct or inform”
(1981 specification at Abstract).

42. In my opinion, the above definition of the term “programming” expressly includes the instruction and information signals referred to numerous times in the 1981 specification (and, as seen above, in the 1987 specification). Indeed, the specification passages cited by the Examiner on pp. 25-27 of the July 2002 Office Action confirm this

view. For example, the repeated discussion in these passages of identifier signals, instruction signals, and information signals being “in” programming simply confirms the express definition provided in the Abstract of the 1981 specification, as does discussion of adding such signals to programming.

43. The 1987 specification’s definition of the term “programming” is as follows:

“everything that is transmitted electronically to entertain, instruct, or inform including television, radio, broadcast print, computer programming, as well as combined medium programming” (1987 specification at p. 11, ll. 6-10).

44. Given that the instruction and information signals disclosed in the 1981 and 1987 specifications are expressly in this definition as well, as well as the limited use of the term “programming” in the amended claims, the issue raised by the Examiner of the definition of the term “programming” in the 1981 and 1987 specifications does not, in my view, bear on the issue of whether or not the amended claims are supported by both specifications. More specifically, the term “programming” is not used as a noun in the amended claims (see Tab A).

(2) Signaling Method and Terminology

45. In the July 2002 Office Action, the Examiner further asserts that several differences between the 1981 and 1987 specifications involving signaling methods and terminology are pertinent to the claimed subject matter in the claims under examination. I will discuss several of these assertions with regard to the amended claims.

46. First, the Examiner maintains that “the ‘instruct signals’ of applicant’s 1987 specification comprised computer software/programming whereas the ‘instruct signals’ of applicant’s 1981 specification did not comprise computer software/programming” (July 2002 Office Action, p. 38). In my view, the accuracy or inaccuracy of this assertion does not bear on the issue of whether or not the amended

claims are supported by both specifications. For example, as discussed in Paragraphs 30 above, both the 1981 and 1987 specifications disclose instruction signals that are not computer software/programming and that serve the claimed functions of amended claim 80. Other instruction signal recitations in the amended claims are similarly supported.

47. Second, the Examiner maintains that “the term ‘signal word’ represents but just one example of the more subtle inconsistencies that exist between the 1981 and the 1987 disclosures” (July 2002 Office Action, p. 38). As noted in the July 2002 Office Action (July 2002 Office Action, pp. 38-39), this term is given the identical express definition (including the relationship of a “signal word” to a “signal unit”) in both the 1981 and 1987 specifications. It is this express definition, and the clear (to a person of ordinary skill in the art in the relevant time frame) applicability of this definition to the transmission of signals in the Wall Street Week example in both the 1981 and 1987 specifications, which I have applied in the analysis of amended claim 93 in Paragraph 35 above, and I find the subject matter of the amended claims supported by both the 1981 and 1987 specifications using this definition.

48. Third, the Examiner maintains that the 1987 specification discloses a Signal Processing Apparatus and Methods (SPAM) environment in which “it was this SPAM packeting which carried an expanded range of ‘signal unit’-like information” (July 2002 Office Action at pp. 41-42, italics in original). Again, whether or not this assertion has merit with regard to new matter (“expanded range”) being present in the 1987 specification, the signals claimed in the amended claims, as discussed in Paragraphs 29-31 above, are supported in both the 1981 and 1987 specifications.

49. Finally, the Examiner appears to assert that unlike the receiver station of the 1981 specification, the receiver station of the 1987 specification could be reprogrammed “on the fly (i.e., without a visit from a service technician being necessary)” (July 2002 Office Action, p. 49). As discussed in Paragraph 44 above, any differences between the 1981 and 1987 specifications in this regard do not bear on the issue of whether or not the amended claims are supported by both specifications.

However, I observe that the Examiner, in making this statement, is overlooking the clear disclosure in the 1981 specification that describes reprogramming of a receiver station without a visit from a service technician being necessary (1981 specification at, e.g., col. 9, ll. 21-22 and col. 10, ll. 10-13).

50. In summary, while the disclosure of signaling protocols is much more detailed in the 1987 specification and that disclosure in a number of cases uses terminology not used in the 1981 specification, the details of the protocol are not recited in the amended claims and the differences in terminology do not bear on the issue of whether or not the amended claims are supported by both specifications.

(3) The Description of the Wall Street Week Example in the 1981 and 1987 Specifications

51. The Examiner asserts that there are inconsistencies between the 1981 and 1987 specifications with regard to the description of the Wall Street Week example of coordinating multimedia presentations in time. I have been asked to determine whether any such inconsistencies bear on the issue of whether or not the amended claims are supported by both specifications.

52. One primary argument of the Examiner in this regard is that the method used to overlay graphic images in the Wall Street Week example involves downloading software in the 1987 specification but involves the “cuing” of the receiver station to execute preexisting software instructions in the 1981 specification (July 2002 Office Action, at, e.g., p. 45). As indicated in Paragraph 49 above, the 1981 specification expressly discloses an ability to reprogram the receiver station in question. In any event, however, none of the amended claims recites the downloading of software instructions and/or reprogramming of the microcomputer 205 of embodiments of the receiver station (see also Paragraph 44 above). I thus conclude that this argument of the Examiner does not bear on the issue of whether or not the amended claims are supported by both specifications.

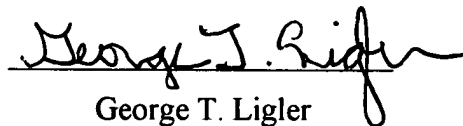
53. The second primary argument of the Examiner is that “all of the recitations that are directed to the signals/instructions/data that are conveyed as ancillary signaling within Radio and TV Programming transmissions, derive their Required Section 112 support from the SPAM signaling that was first introduced by applicant’s “1987” instant disclosure.” (July 2002 Office Action, p. 46). As discussed in, for example, Paragraph 30 above, the 1981 and 1987 specifications both support the claimed signals, and the amended claims do not recite the details of the SPAM signaling method, those details indeed in many instances being first introduced in the 1987 specification.

54. I therefore conclude

Opinion C: Differences between the 1981 and 1987 specifications concerning the topics enumerated in Paragraph 2(2) above would not impact the ability of one of ordinary skill in the art to conclude that the subject matter claimed in the amended claims is sufficiently described in both specifications.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of patent application 08/470,571 or any patent that issues thereon.

Executed this 8th day of January, 2003, at Potomac, Maryland.


George T. Ligler